

# Yuang Fan

Contact Number: 3097036757 | Email: yfan233@wisc.edu

## EDUCATION

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*University of Wisconsin-Madison*

*Master of Information Science*

*Sept 2022 – Dec 2023*

*The Chinese University of Hong Kong (CUHK)*

*Sept 2018 – Jul 2022*

*Bachelor of Engineering: Financial Technology*

Relevant Courses: System Simulation, Advanced Database Technologies, Problem Solving by Programming, Optimization Methods, Computer Network, Fundamentals in Information Systems, Data Structures, Cyber Security

- Outstanding Students Award (2019)

## RESEARCH EXPERIENCE

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**Department of System Engineering and Engineering Management, CUHK**

*Sept 2021 – Dec 2021*

*A Machine Learning Approach to Building Index Structures*

*Supervisor: Professor Cheng Hong, Chairman of the Department of System Engineering and Engineering Management*

*Tech stack: Python, Flask, Pytorch*

- Built index structures, such as learned index, hash table and AVL tree etc.
- Compared memory space, query time, and other indicators of established indexes and found out that learned index could save memory space and its query time had the potential to be short.
- Conducted research on how indexes can enhance database search efficiency and applied a neural network to construct a learned index

**Zhejiang University & York University**

*Jul 2021 – Nov 2021*

*Business School Research Assistant (remote)*

*Tech stack: Node.js, Express*

- Crawled data and game-related information on gamespot.com and metacritic.com
- Filtered out less related review information and designed the database structure to store the data
- Performed data analysis to study the user background and user behavior on posting reviews

## INTERNSHIP EXPERIENCE

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**International Business Machines Corporation (IBM)**

*Jun 2022 – Jul 2022*

*Developer*

*Tech stack: Java & MDX (similar to SQL)*

- Wrote MDX to analyze and draw tables of project management-related data in Jira to help demonstrate what the team did and how efficient we were about completing development requirements in the past few years
- Modified some API in the system based on the requirements of the leader.

**Solacetre Counselling Limited**

*Nov 2021 – Jan 2022*

*Software Programming Intern*

*Tech stack: Expo (React Native)*

- Communicated with users to get their feedback and did the corresponding improvement in the mobile application
- Developed H5 mobile website and app in both IOS and Android systems using expo (react native)
- Collaborated closely with the back-end development team and used the API developed by the back-end team

**Burtaka Technology (Shenzhen) Co., Ltd.**

*Apr 2021 – Jul 2021*

*Full-stack Engineer Intern*

*Tech stack: Taro (React native) + Node.js (Express framework) + MongoDB (Mongoose framework)*

- Conducted user research on the possible improvement on the existing word memorizing applications and communicated with the team about how to write the application
- Developed the prototype of the “my vocabulary” feature with Axure
- Used Taro framework to develop a WeChat mini program for word memorizing
- Crawled Youdao Dictionary by SuperAgent and parsed the HTML in the text field of response by Cheerio
- Applied css@keyframe proficiently to realize various animation effects and page functions in the front end
- Wrote various routers and developed restful API in the back end
- Designed algorithms of vocabulary measurement based on word frequency analysis
- Used aaPanel to operate and maintain backend servers

## ADDITIONAL SKILLS

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- Computing Skills: Proficient in Java, MongoDB, node.js, React, Axure, Python, Flask, Express, PHP, HTML, CSS
- Languages: Mandarin Chinese (Native), English (Fluent)